

## REMARKS

### I. Introduction

Receipt is acknowledged of a non-final Office Action dated September 22, 2004. In the action claims 1-9 were rejected as allegedly obvious over Lee *et al.*, *Cancer Research* 62:3530-37 (2002) (“Lee”).

### II. Status of the Claims

In this response applicants did not amend, cancel or add new claims. Upon entry of this amendment, claims 1-9 will be under examination.

### III. Rejection of the Claims Under 35 U.S.C. § 103

Claims 1-9 were rejected under 35 U.S.C. § 103 as allegedly obvious over Lee. In particular, the claims were rejected because although “Lee et al. differs from the claimed invention in the use of IGFB[P]-3 in a patient with the conventional mode of administration[,]” Lee allegedly “teach[es] the use of insulin-like growth factor binding protein-3 for the inhibition of the growth of non-small cell lung cancer.” Office action at 2. Applicants respectfully traverse this ground for rejection.

In levying an obviousness rejection under 35 U.S.C. 103, the Office has the burden of establishing (1) some suggestion or motivation to modify the reference or to combine reference teachings, (2) that the combination has a reasonable expectation of success, and (3) that the prior art references, when combined, teach or suggest all the claim limitations. *See* MPEP §2143 (Aug. 2001). “Both the suggestion and the reasonable expectation of success must be founded in the prior art, not in the applicant’s disclosure.” *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438 (Fed. Cir. 1991).

Lee describes that “delivery of IGFBP-3 via a recombinant adenovirus inhibits lung cancer cell growth *in vitro* and reduces tumor growth *in vivo* via induction of apoptosis.” Lee at 3536. But Lee does not disclose treating a lung cancer patient comprising administering a therapeutically effective amount of an IGF binding *protein*. Moreover, Lee does not even

suggest using an IGF binding protein, or any other protein as a therapeutic agent. Lee's mode of administration is limited to adenovirus gene therapy and there is no reasonable expectation, based on the teachings of Lee, that IGFBP-3 in protein form is suitable for treating lung cancer. At best, it would be obvious to try protein delivery but "obvious to try" has long been held to not constitute obviousness." *In re Deuel*, 51 F.3d 1552, 1559, 34 USPQ2d 1210 (Fed. Cir. 1995).

In addition, a skilled artisan can not extrapolate from Lee's use of a viral vector for IGFBP-3 delivery that systemic delivery of IGFBP-3 protein alone would be of sufficient dosage or with sufficient specificity for the target tissue to effect treatment. In fact, Lee describes that the IGFBP-3 adenovirus vector "was intratumorally injected." Lee at 3531, first full paragraph, second column. Accordingly, Lee was able to achieve a high local concentration of IGFBP-3 at the tumor site. But the present invention not only contemplates protein delivery, but systemic delivery of IGFBP-3 to treat lung cancer. Therefore, based on the teachings of Lee, it would be unexpected that systemic delivery of an IGFBP-3 in protein form would be suitable for treating lung cancer.

Lastly, with respect to claims 6 and 7, Lee does not disclose treatment with the claimed therapeutic amounts of IGFBP-3, nor could one skilled in the art could determine an appropriate dose based on the teachings of Lee. Indeed, it is difficult to predict in gene therapy methods the amount of IGFBP-3 actually expressed at the tumor site and therefore the dosage of IGFBP-3 actually required to achieve a therapeutic effect. Thus, Lee does not teach or suggest each and every element of the presently claimed invention.

## CONCLUSION

Reconsideration of the present application in view of the foregoing amendments and arguments is kindly requested.

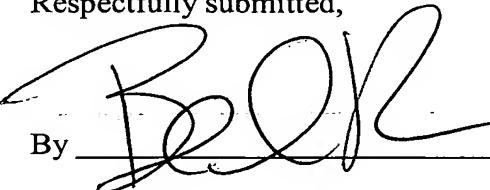
It is respectfully urged that the present application is now in condition for allowance. Early notice to that effect is earnestly solicited.

Examiner Fay is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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Date: December 22, 2004

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